Micronesica Suppl. 3: 47–49, 1991

Introduced Ornamental Plants that Have Become Weeds on Guam

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Abstract—Introduced ornamental plants that are considered weeds on Guam include *Antigonon leptopus* Hooker & Arnott, *Spathodea campanulata* Beauv., *Coccinea grandis, Bauhinia monandra* Kurz., *Clerodendrum quadriloculare* (Blanco) Merrill, *Lantana camara* L., *Ficus* spp., *Asystasia gangetica* (L.), *Pilea microphylla* (L.) Liebm., *Wedelia trilobata* (L.) Hitche., *Mikania scandens* and *Mimosa pudica* L. Characteristics of ornamental plants that could become weeds on Guam include rapid growth/regrowth and prolific seed production.

Introduction

Many introduced perennial ornamental herbs, shrubs, vines and trees have become weeds in their new habitats in the absence of their natural enemies that kept them under check in their native habitats. Neel & Will (1978), Hardt (1986), and Patterson (1976) listed a number of introduced ornamental plants that became weeds in the United States. Hazard (1988) has drawn attention to the risk of introducing weeds in the process of introducing pasture, crop and ornamental plants into Australia. He has also given examples of such weeds. Several plants introduced as ornamentals have become serious weeds on Guam. This paper presents a list of such exotic weeds established on Guam with some notes on them.

Antigonon leptopus Hooker & Arnott (Polygonaceae) - Chain of Love, Mexican Creeper

This aggressive spreading vine is a native of Mexico and has been introduced to many tropical and sub-tropical regions as an ornamental plant. The heart shaped leaves are 3 to 5 inches long and are distributed alternately along vining stems. It flowers throughout the year and is prolific in producing seeds. Small edible underground tubers are produced. This has become a very aggressive weed and has overgrown most vegetation in many areas in Guam.

Spathodea campanulata Beauv. (Bigoniaceae) - African Tulip Tree

This is a large showy tree growing to 70 feet. It is quite common in Guam. The leaves are dark green, 1 to 2 feet long. The flowers are orange-scarlet lined

with yellow. The flowers are found in abundance through much of the year. The wood of this tree is soft and is easily broken during storms. The fallen pieces are capable of rooting and develop into trees. It is also a very prolific seed producer and easily propagates by seed. It was introduced as an ornamental but it has escaped cultivation to many of the roadsides in Guam.

Coccinea grandis (L.) Voigt (Cucurbitaceae)

This plant is a recent introduction to Guam and is just becoming established. It is not really used as an ornamental but is used medicinally and as a food plant. It has not yet been observed producing fruits in Guam and has apparently spread only vegetatively. It is capable of covering the canopy of other plants including large trees. In Hawaii and the Caribbean, birds eat the dark pink ripened fruits.

Bauhinia monandra Kurz. (Caesalpiniaceae) Orchid Tree

The orchid tree has leaves shaped like butterfly wings and attractive orchid-like flower. It is often used as a landscape plant. It is generally propagated by cutting or seed. It is considered a fast growing tree and heavy seed producer. It has escaped from cultivation and has become established in many wooded areas in Guam.

Clerodendrum quadriloculare (Blanco) Merrill. (Verbenaceae)

This shrub has an attractive dark foliage and is used as a landscape plant. It produces many suckers from the roots and is a prolific seed producer. It readily establishes along the foundations of houses and is difficult to remove. Clerodendrum has escaped cultivation and can be observed along roadsides in several areas around Guam.

Lantana camera L. (Verbenaceae)

Lantana is a popular ornamental shrub that has been introduced to many areas because of its abundant and colorful flowers. In tropical and subtropical regions it has become a serious weed. Birds feed on the berries of lantana spreading it from cultivation to pastures and forests. With thorny woody stems lantana is difficult to remove once established.

Ficus spp. (Moraceae)

Many species of *Ficus* are used as landscape plants or as house plants. They have a great potential to become weeds if allowed to escape cultivation. They can become a weed of other ornamental plants and are difficult to eradicate once established. Seeds, spread by birds, can germinate in the crotch of other tress and eventually overgrow the host tree. Cut trunks will readily sprout new vegetation. Many species are prolific seed producers. In addition, the surface root system can damage sidewalks and curbs.

Asystasia gangetica (L.) (Acanthaceae)

Asystasia is a trailing perennial herb, which can climb several feet high on fences and taller plants. It is cultivated as a cover crop but has escaped cultivation

and became established in many areas on Guam. Asystasia is a prolific seed producer and rapidly fills an area with seedlings.

Pilea microphylla (L.) Liebm. (Urticaceae) Artillery Plant

Pilea is often grown as an ornamental. It is a small plant but is a prolific seed producer. It is commonly found on the surface of potted plants and in lawns. It is an aggressive grower and quickly makes a dense cover in shade. It is even capable of overgrowing small orchid seedlings growing in crushed limestone. Nurseries on Guam import various forms of this plant from Hawaii.

Wedelia trilobata (L.) Hitche. (Asteraceae)

This plant is commonly used as a ground cover. It has showy yellow flowers and quickly establishes a dense cover that competes well with other plants. It is aggressive enough to become a weed. There are many locations around Guam where it has escaped cultivation and has covered entire clearings.

Mikania scandens (L.) Willd. (Asteraceae)

This is a member of the Eupatorium tribe. It is an aggressive vine with white flowers. It is suited to colonizing in wild places with its aggressive vining habit. It can be observed growing in large patches around Guam.

Mimosa pudica L. (Mimosoideae) Sensitive Plant

This is a low growing thorny plant with reddish-brown stems that are sensitive to touch. It is a common curiosity plant in temperate regions and escaped from cultivation in many tropical and sub-tropical regions. It is a serious weed in lawns and roadsides on Guam. Because it has woody stems, it is difficult to weed by hand.

Plant Characteristics for Identifying Potential Weeds

It is important that we consider the potential of new ornamental plants for becoming weeds in Guam. Australia has prohibited the entry of 66 species and 21 genera that have weed potential (Hazard 1988). One of the difficulties in deciding to introduce a new species is that some of the characteristics of a weed are desirable characteristics for some intended uses. For example, ground covers should be aggressive growers so that they will quickly establish in a planted area. Another desirable characteristic for an ornamental is prolific flowering.

Individuals in tropical and sub-tropical regions must become more aware of the risks in freely introducing new ornamentals. Knowledge of potential weeds and potential characteristics to watch for would help lessen the introduction of new weeds. Once a plant becomes a weed in a region, it has the potential to be a weed elsewhere with similar bioclimatic regimes, and neighboring areas should be alerted to the potential threat.

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